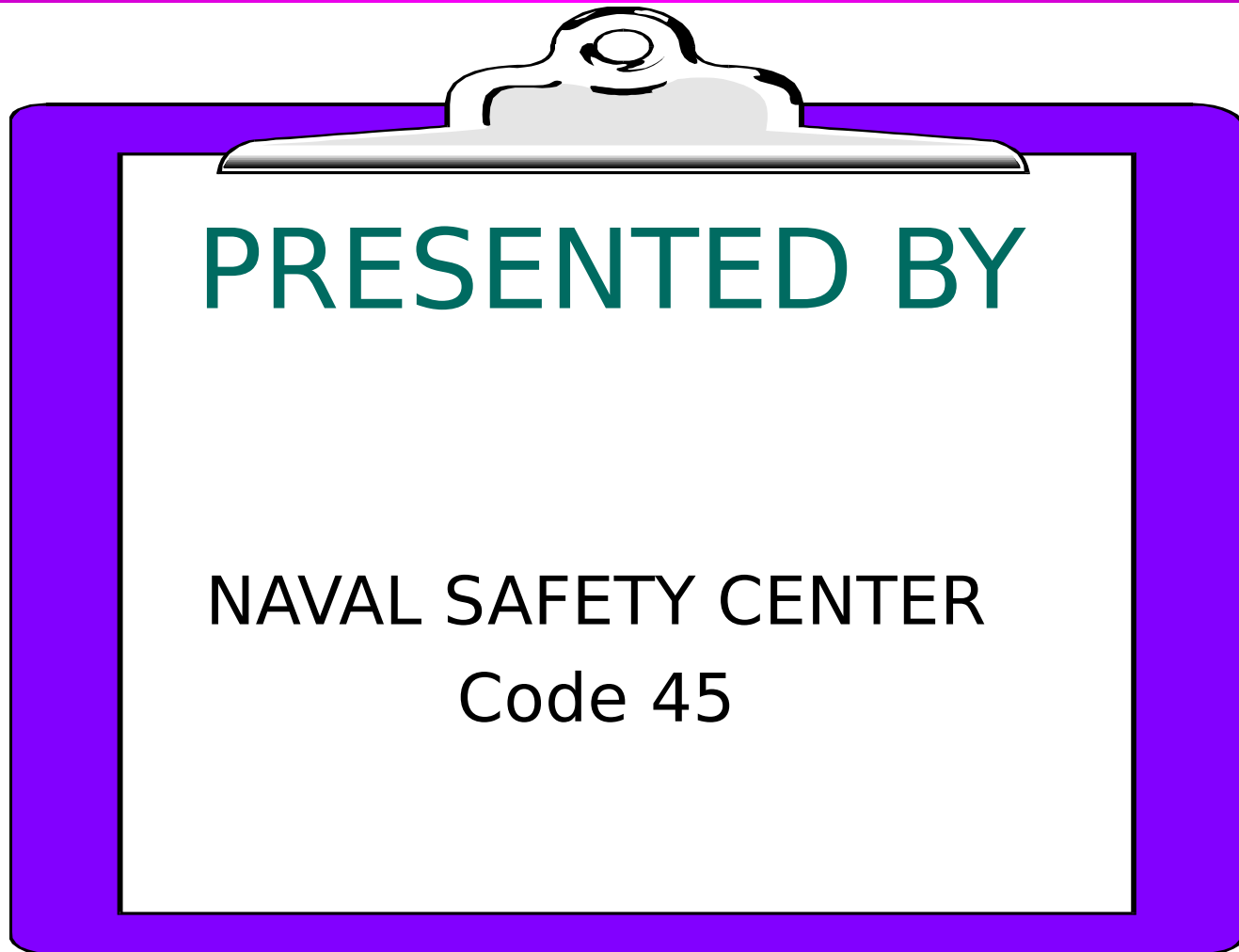


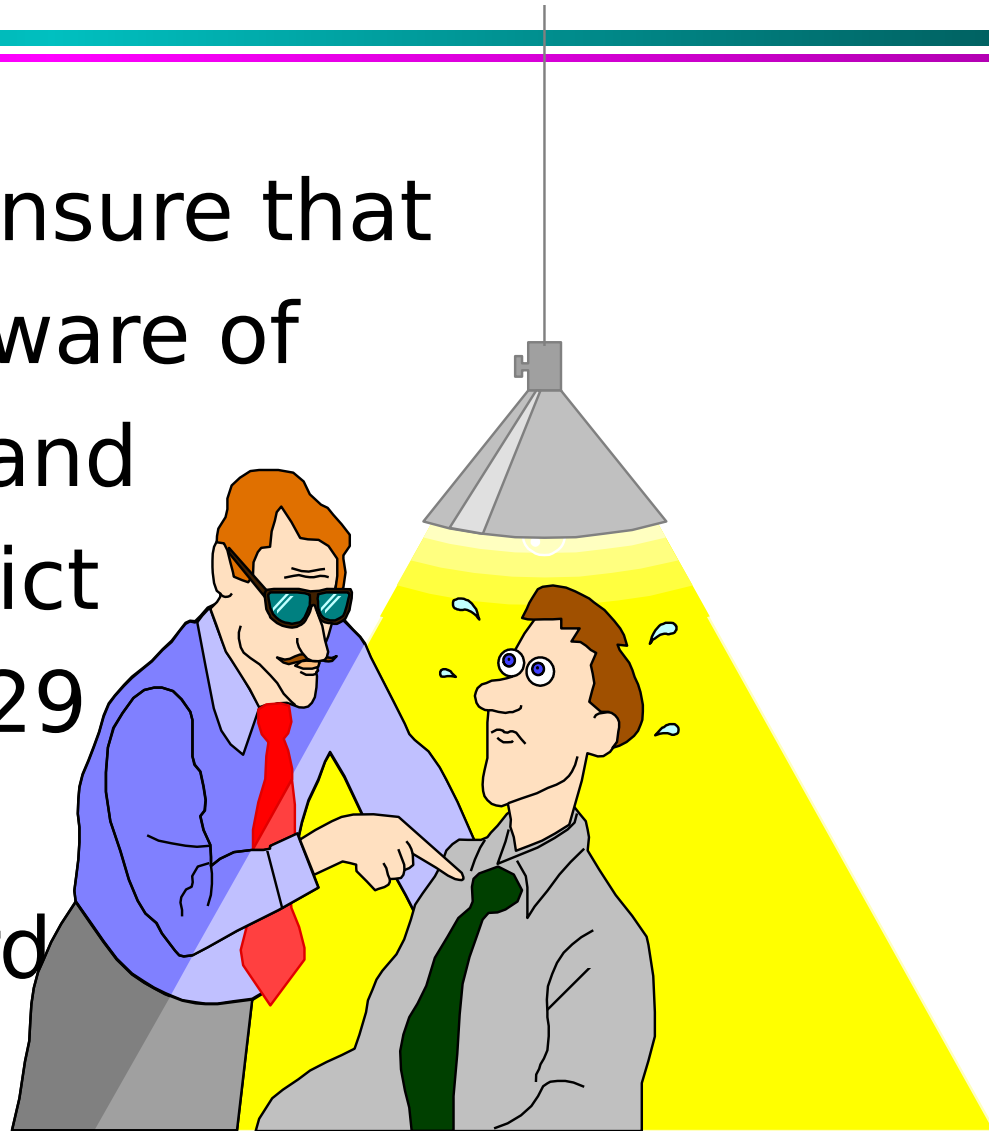
# ASBESTOS HAZARD TRAINING

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# Work

Command shall ensure that  
contractors are aware of  
potential hazard and  
shall maintain strict  
compliance with 29  
CFR 1926.1101  
Asbestos Standard

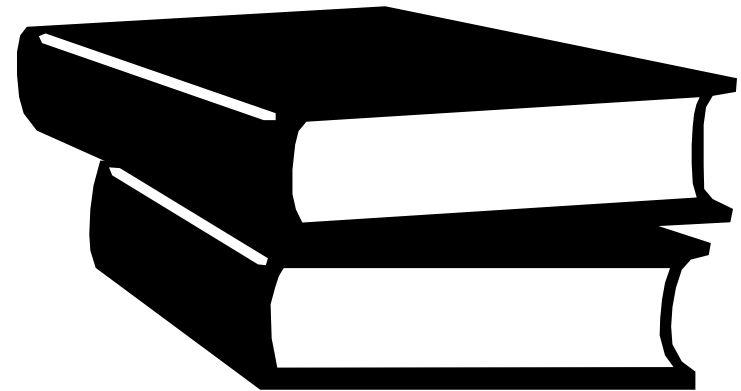


# REFERENCES

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29 CFR 1910.1001  
&  
29 CFR 1926.1101

OPNAVINST  
5100.23D

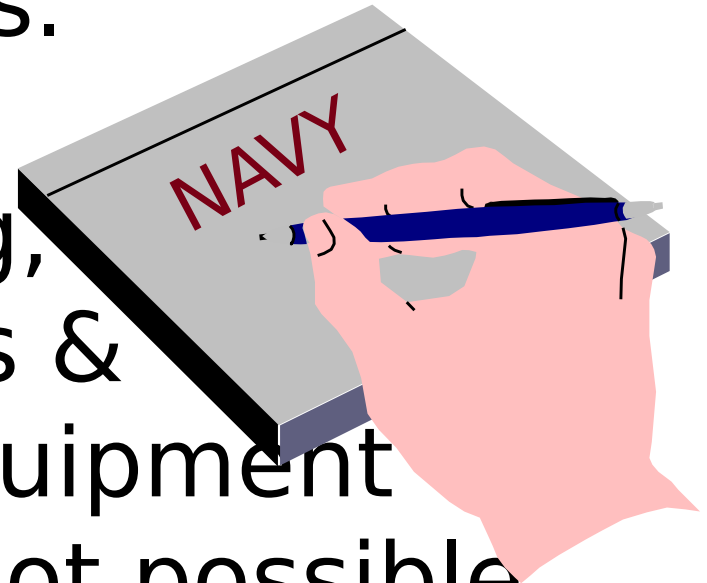


# ASBESTOS POLICY

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The substitution of asbestos with non-asbestos materials.

The use of engineering, administrative controls & personal protective equipment where substitution is not possible.



# WHAT IS ASBESTOS?

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Widely used, mineral based material

Resistant to heat & corrosive chemicals

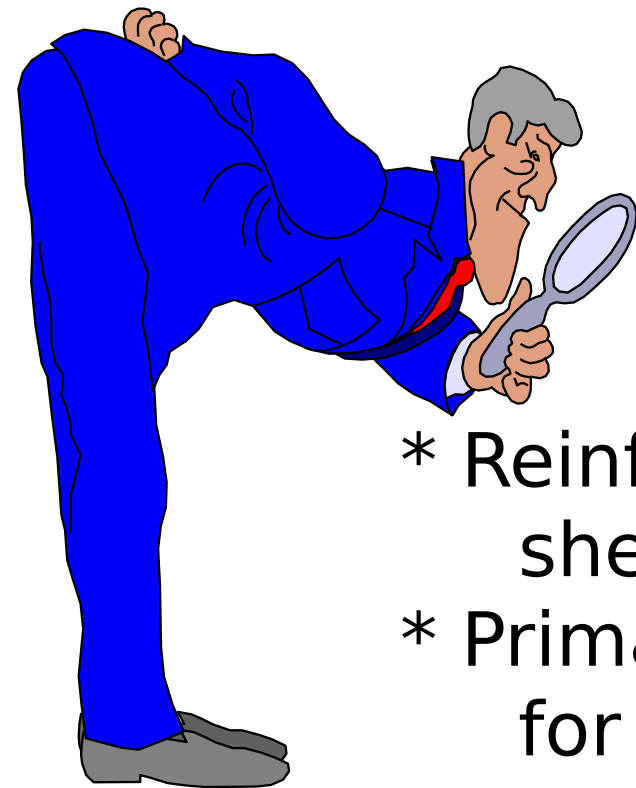
Fibers may range from coarse to silky



# Areas Where Asbestos Can Be Found

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- \* Suspended ceiling tiles
- \* Thickening agents in paints
- \* Exterior siding shingles
- \* Fireproof drapes and curtains
- \* Vinyl flooring and mastic (glue)
- \* Friction products (brake & clutch facings)
- \* Reinforcing materials (cement pipe & sheet materials)
- \* Primary insulation and lagging material for high temperature machinery, boilers, and piping



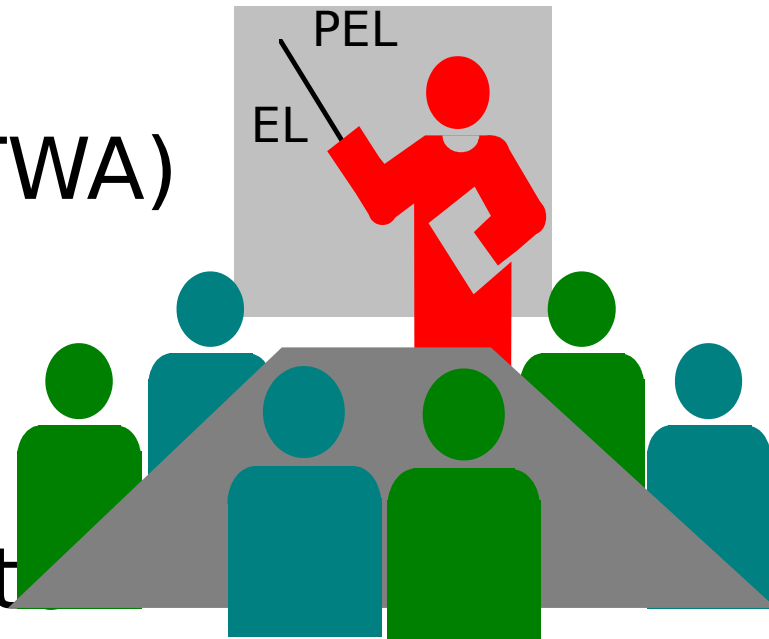
# Exposure Limits

Permissible Exposure Limit (PEL)

0.1 Fibers per cubic centimeter of air  
calculated as an 8 hour  
time weighted average (TWA)  
exposure.

Excursion Limit (EL)

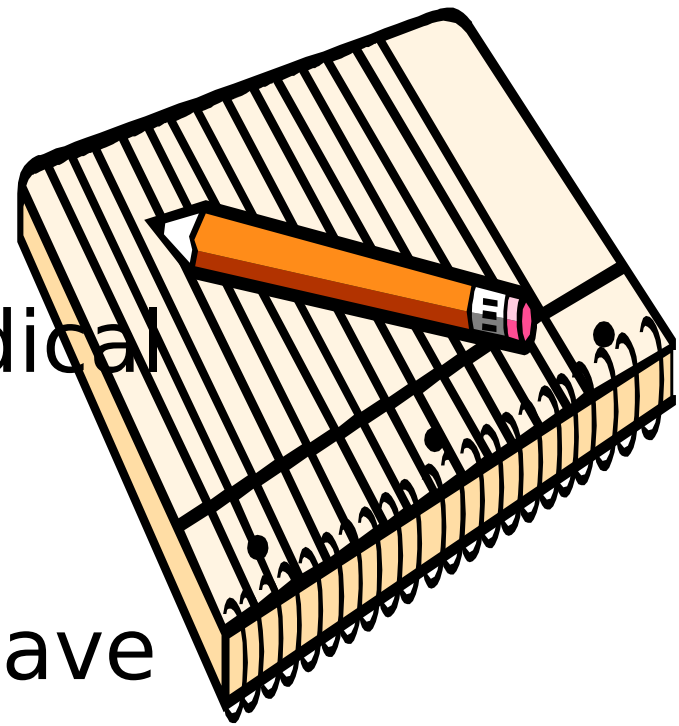
1 Fiber per cubic centimeter  
averaged over a 30 minute  
sampling period.



# Exceeding Exposure Limits

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If potential over-exposure exist, it is necessary to begin air monitoring, employee training, and medical surveillance.



Naval personnel known to have been exposed to airborne concentration above the PEL shall be notified in writing of



# Asbestos Containing Material

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Friable Asbestos - Reduced to powder by hand pressure when dry.

Non-Friable Asbestos - Usually found bonded into other materials.

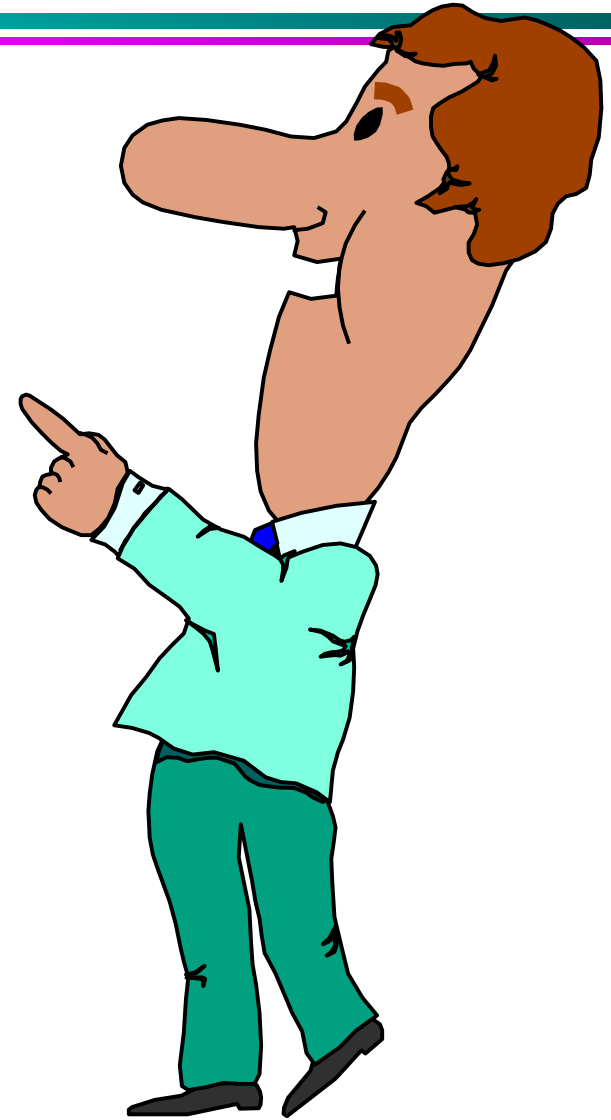
Definition: Friability - the likelihood that fibers will break loose and become airborne.



# Sources of Damage Resulting in Fiber Release

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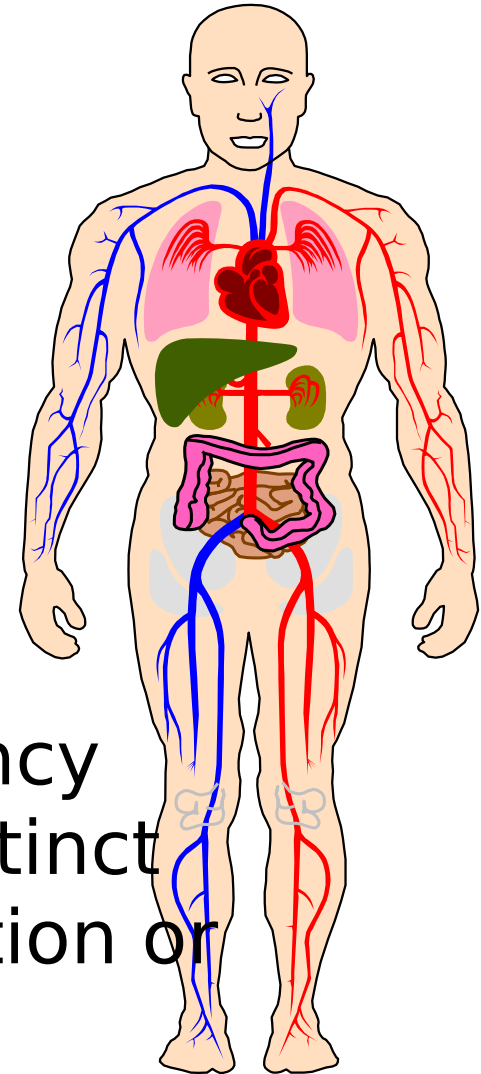
- Chemical spills, leaks or fumes
- Fans and blowers
- Exposure to elements
- Vibration
- Impact from other objects
- Drilling



# How Asbestos Enters The Body

- By INHALATION
- By INGESTION

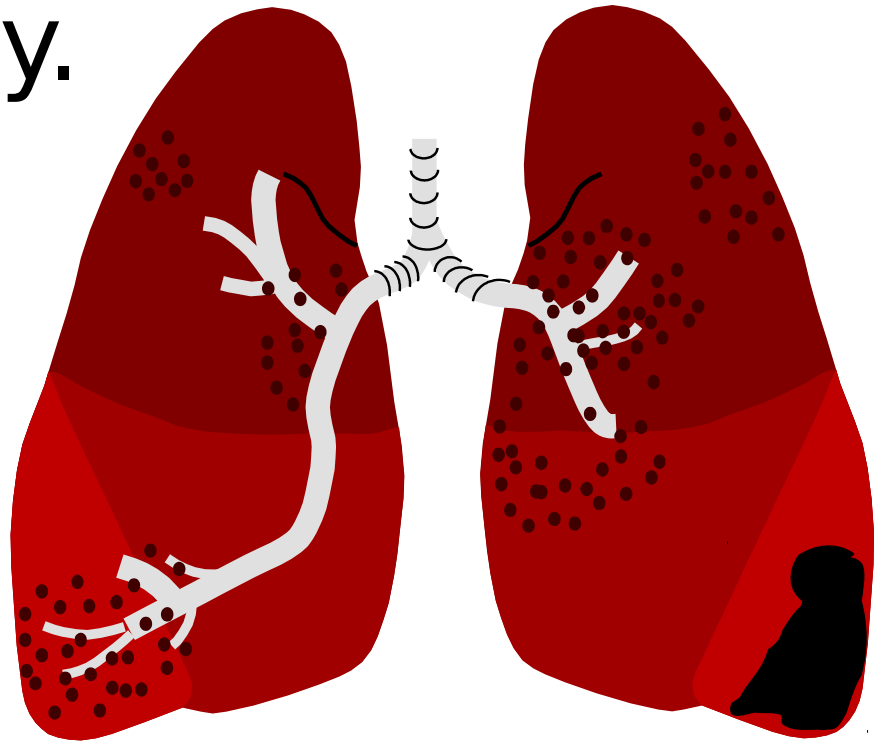
In the body, asbestos fibers can become embedded in the tissues of the respiratory tract or the digestive system. There have been cases of 20-40 years of latency before malignancy appears. 3 distinct diseases can be caused by inhalation or ingestion. They are:



# MESOTHELIOMA

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A rare malignant tumor of the lung membrane which lines the chest and abdominal cavity.



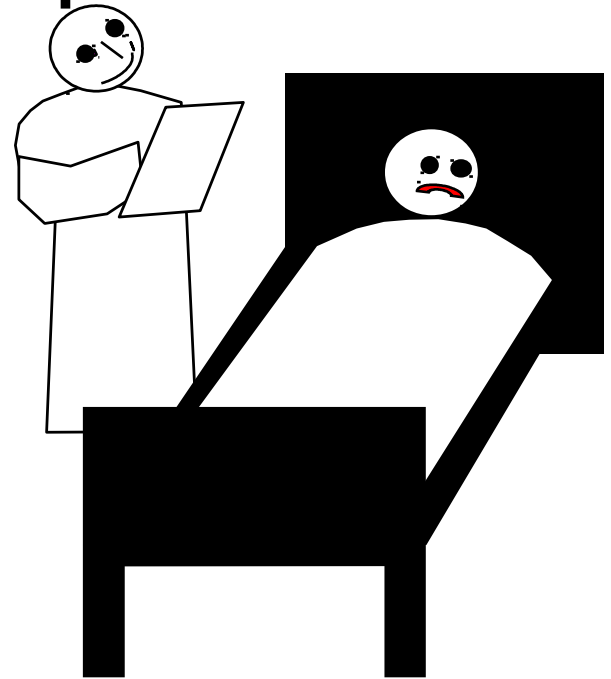
# ASBESTOSIS

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A progressively restrictive fibrosis of the lung and is recognized as a disabling and fatal occupational disease.

Definition:

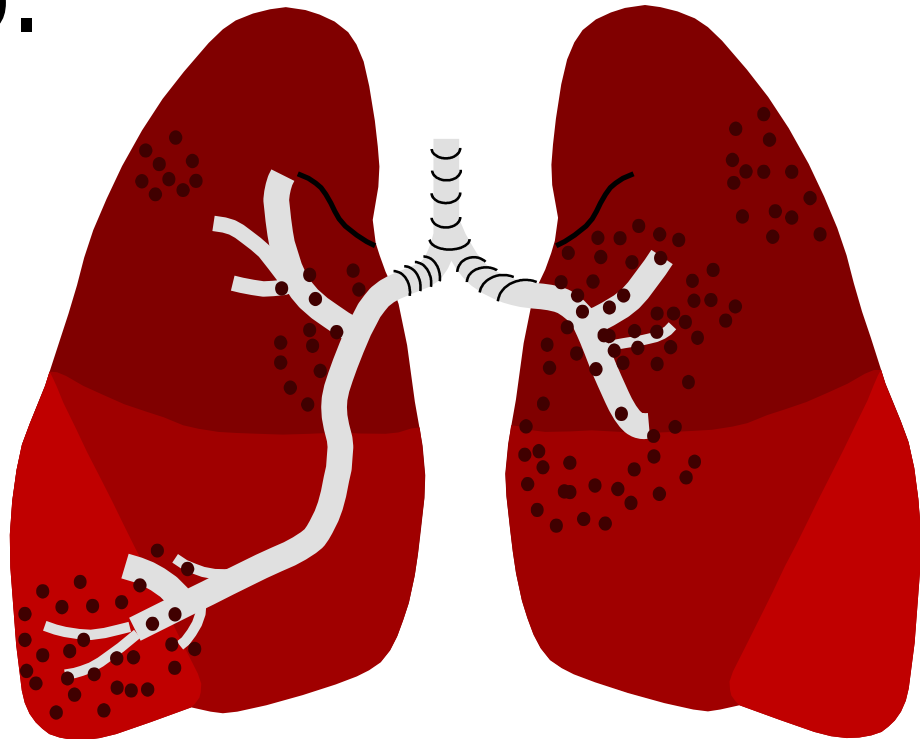
FIBROSIS - A condition marked by the increase of connective, fibrous tissue.



# BRONCHIAL LUNG CANCER

---

Malignant tumor of the bronchial tube  
this disease is more common than the  
following two.



# Health Hazards of Asbestos and Tobacco

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Asbestos workers who smoke have a 50 times greater chance of getting lung cancer than those who do not smoke.



# Working with Asbestos

ASBESTOS WHEN:


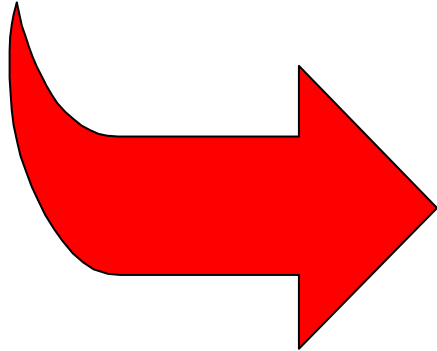
HANDLED

MIXED

APPLIED

REMOVED

CUT SCORED



SHALL BE WORKED IN  
A WET STATE SUFFIC-  
IENT TO PREVENT  
EMISSION OF AIR-  
BORNE FIBERS IN  
EXCESS OF PEL.

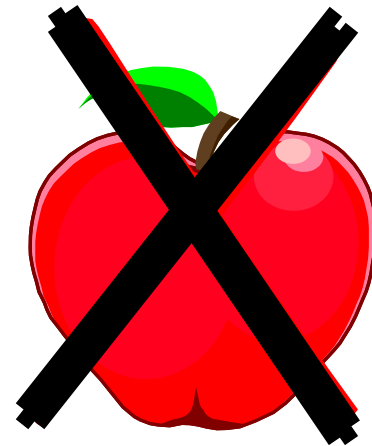


# Employees Working with Asbestos Shall Not:

Eat / Drink  
Chew tobacco  
Chew gum  
Smoke  
Apply cosmetics



IN THE WORK  
AREA.



# Medical Surveillance

## Program



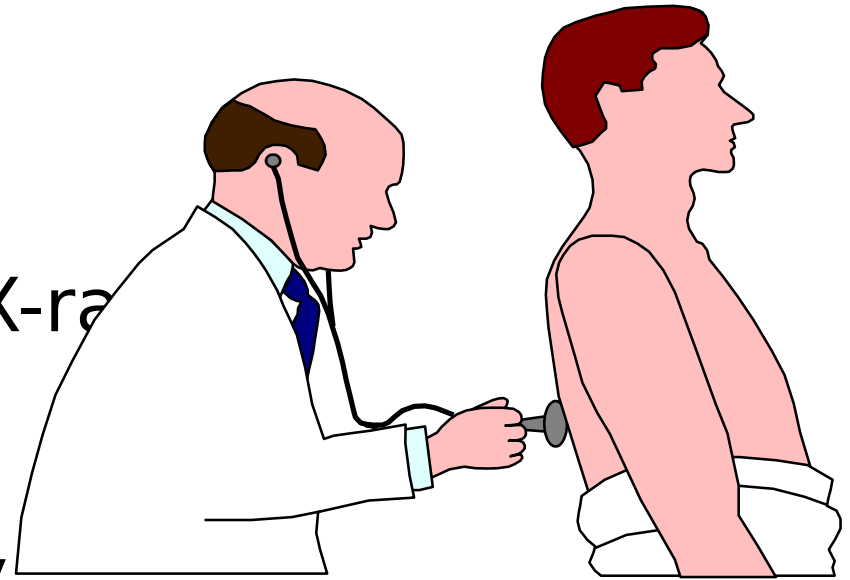
- All Naval personnel upon assignment to a work activity involving potential exposure to asbestos shall have a medical evaluation. The evaluation shall be performed prior to the assignment and shall

# Medical Surveillance

## Program cont'd

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- Occupational and medical history detailing prior exposure to potentially harmful respiratory hazards
- Chest examination
- Posterior/anterior chest X-ray
- Pulmonary function tests including forced expiratory volume in one second (FEV1) and forced vital capacity (FVC)



# Periodic and Termination Evaluations

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A medical evaluation equal to the pre-placement evaluation shall be conducted in accordance with the medical surveillance schedule:

Years since first  
Employee  
asbestos exposure  
35-45    45+



Age of  
15-35

0 - 10

11 - 15

16 - 20

21 - 25

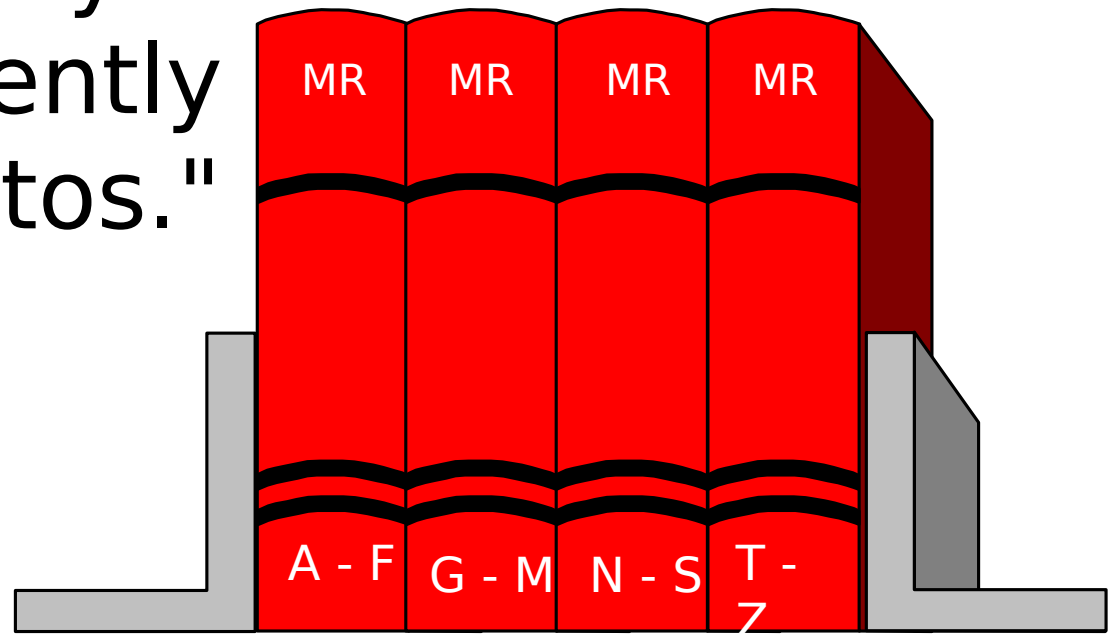
# Opinion

- Opinion concerning any detected medical condition that would place the employee at an increased risk to exposure to asbestos.
- Any recommendation for limitations on the work of the employee or upon the use of protective equipment.
- A statement that the employee has been informed by the physician of the results of the evaluation and of any medical conditions resulting from asbestos exposure that require further explanation or treatment.
- The signed opinion will be placed in the employees



# Records

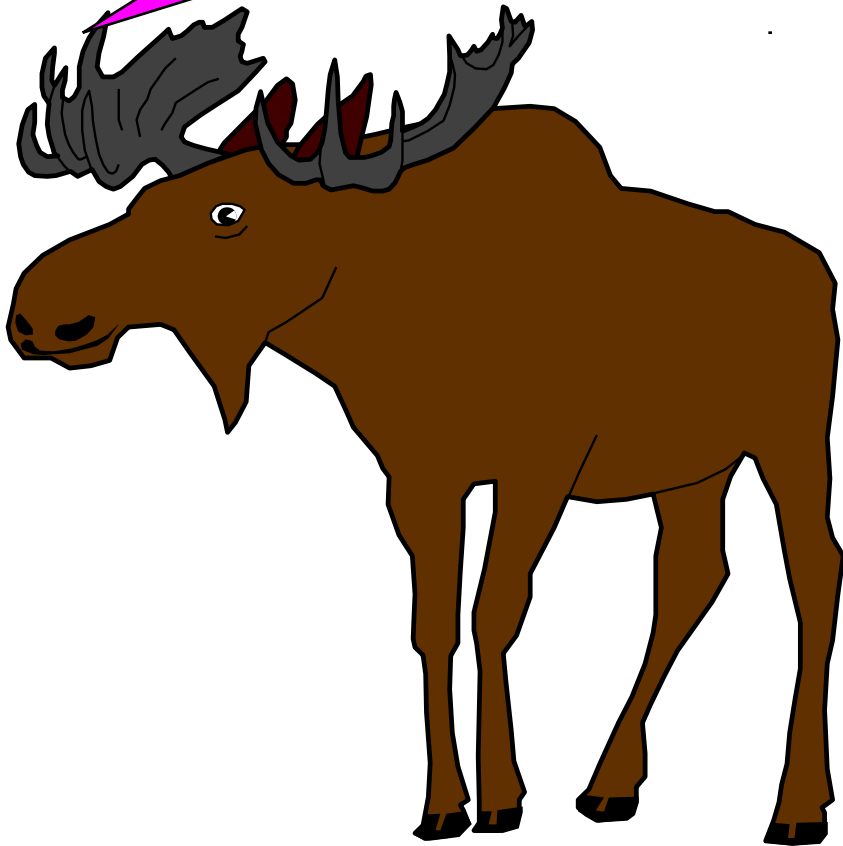
All personnel who are included in the asbestos medical surveillance program shall have the exterior of their health records and X-ray jackets prominently marked "Asbestos."



# Personal Protective Equipment

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My Antlers Protect Me !



Personnel involved in handling asbestos containing materials during "rip-out" or where the PEL is exceeded shall wear protective clothing.

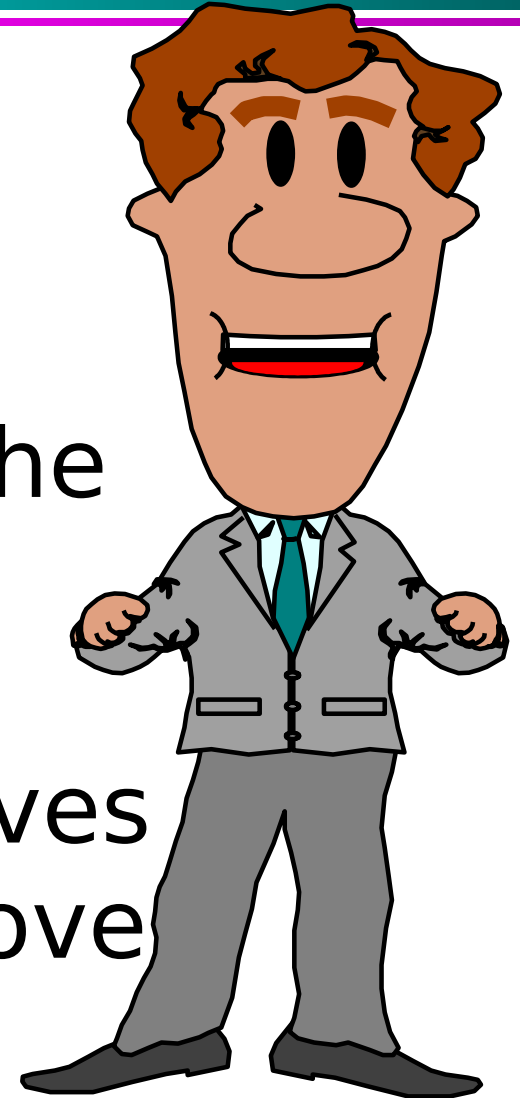
# Protective Clothing Required

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Full body, one-piece  
disposable coveralls

Hoods extending beyond the  
collar

Medium weight rubber gloves  
and a thin cotton under glove





# Protective Footwear

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**SLIP RESISTANT PLASTIC SHOE COVERS**

**HEAVY POLYETHYLENE SHOE COVERS**

**WITH SLIP RESISTANT SOLES, OR LIGHT**

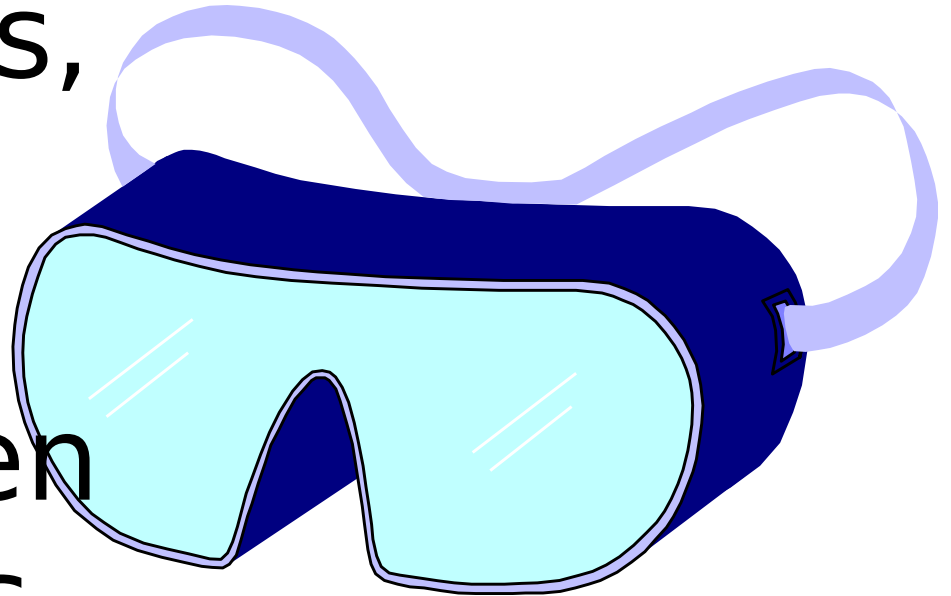
**WEIGHT RUBBER BOOTS.**



# Face Protection

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Face Shields,  
vented goggles,  
or other  
appropriate  
protection when  
eye irritation is  
possible



# Respirator Program



1. Development of a respirator program SOP.
2. Fit testing initially & annually thereafter.
3. Records are retained indefinitely.

# Protective Equipment

## Cont'd

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Proper  
respiratory  
protection  
as determined  
by

# Lunchrooms

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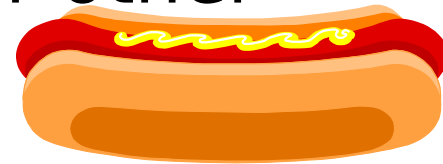
Special lunchroom facilities shall be provided for employees who work in areas where their exposure is above the PEL.



These facilities shall have a positive pressure, filtered air supply & should be readily accessible.



Prior to use, employees should have washed their faces, hands and removed surface asbestos from clothing & equipment by vacuuming or other means.

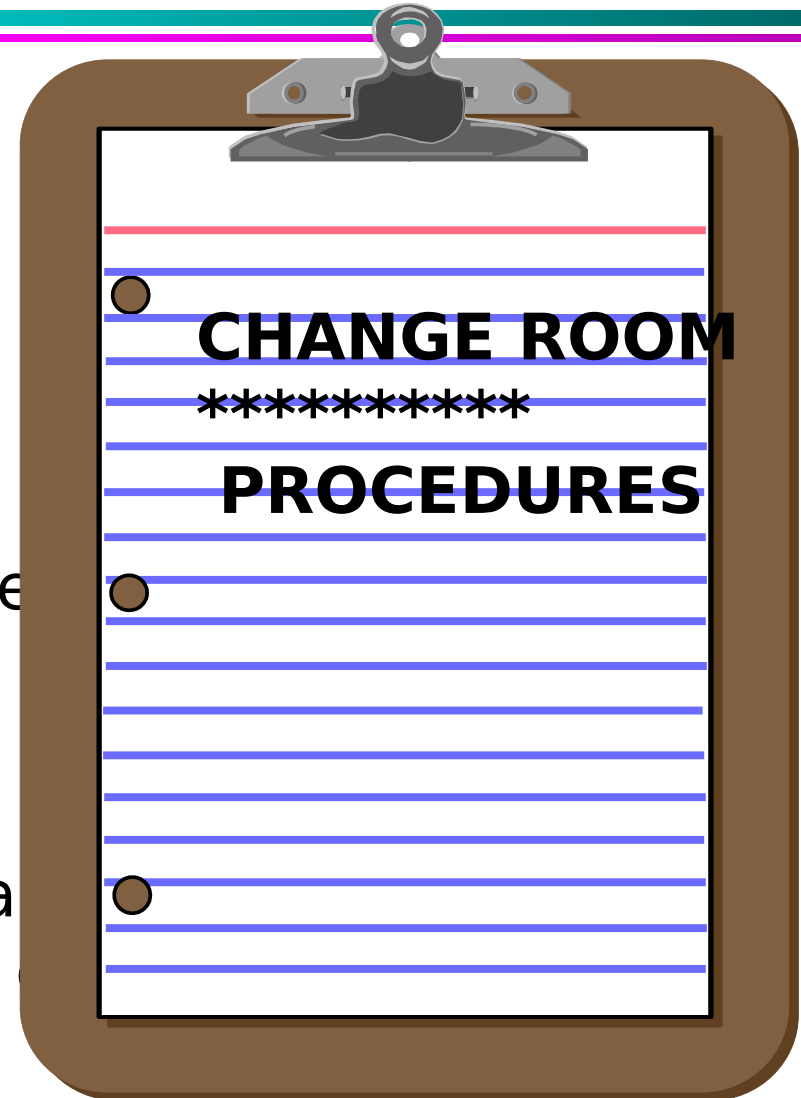


# Changing Facilities

Procedures for the removal of clothing shall be posted, including leaving respirator on while vacuuming clothing and during clothing removal.

Shower facilities shall be located between the clean and dirty facility.

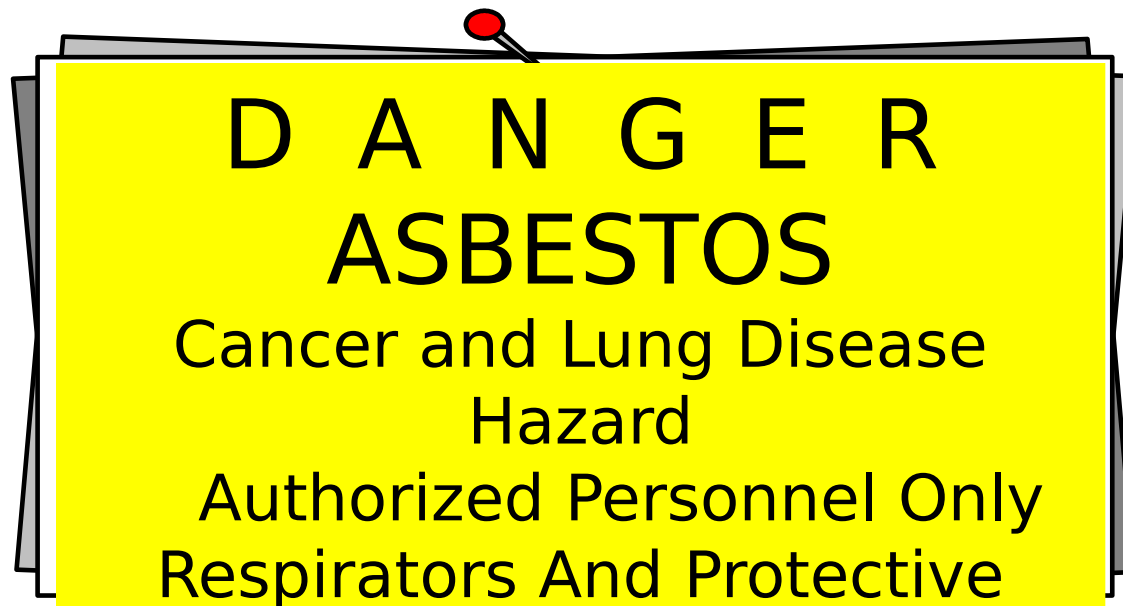
Supervisors shall ensure that all personnel take showers at the end of each shift.



# Warning Signs

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- \* Conspicuously displayed anywhere the air concentration exceeds PEL.
- \* Required protective equipment may be at to or be a part of the sign.



# Labels

- Warning labels shall be attached to containers.
- Labels shall be printed in letters of sufficient size &

**D A N G E R**

**Contains Asbestos  
Fibers**

Avoid Creating Dust

Cancer & Lung  
Disease Hazard



# Disposal Procedures

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- Containers must be properly labeled with standard asbestos warning.
- Asbestos waste containers shall be color coded for easy recognition.



# Disposal Procedures

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- Must be adequately wetted.
- Double bagged in heavy duty plastic.
- Exercise care to prevent rupturing when being moved.
- Dumpsters shall be labeled

# T r a i n i n g

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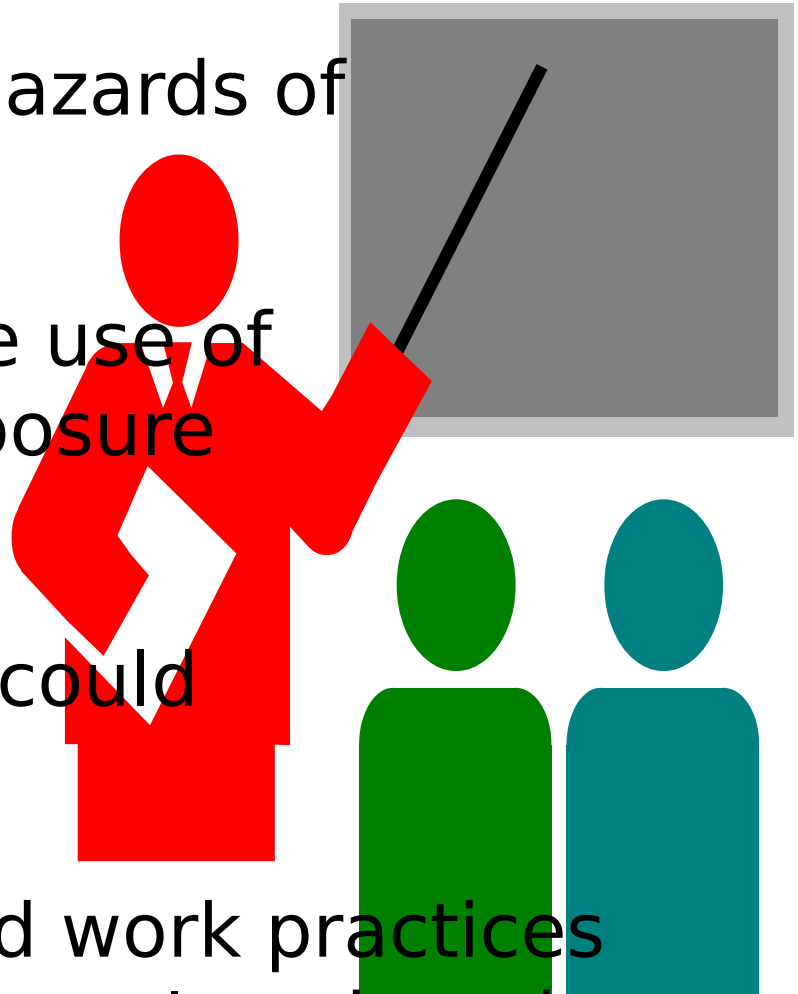
If you are a Naval employee who works with or handles asbestos or may be exposed to asbestos fibers in excess of the action level, then you shall receive the following training upon initial assignment and annually thereafter:



# Training

## cont'd

- The health effects and hazards of asbestos
- Association between the use of tobacco and asbestos exposure in producing lung cancer
- Uses of asbestos which could result in an exposure
- Engineering controls and work practices associated with an employees' work assignment



# Training

## cont'd

- Purpose, proper use, and limitations of protective equipment
- Purpose and description of medical surveillance
- Description of emergency and cleanup procedures
- Overall review of OPNAVINST 5100.2 Series, Chapter 17 and the command/activity instruction concerning asbestos.

